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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,705	08/05/2003	Isao Tsuru	241188US0	6742
22850	7590	09/08/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SHOSHO, CALLIE E	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,705	TSURU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12 June 2006.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-26 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 6/12/06.

The new grounds of objection and rejection set forth below are necessitated by applicants' amendment and thus, the following action is final.

**Claim Objections**

2. Claims 3-4, 8-9, and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

(a) Claim 3 and Claim 8, which each ultimately depend on claim 1, recite that the "copolymerizable monomer comprises at least one monomer selected from the group consisting of an aromatic ring-containing monomer and a styrenic macromer" while claim 1 has been amended to recite that the "copolymerizable monomer is selected from the group consisting of a styrenic macromer and a silicone macromer". Thus, claim 3 and claim 8 each fail to further limit the scope of the claim on which they each ultimately depend, namely claim 1, given that claim 3 and claim 8 are each broader than claim 1. That is, while claim 1 is limited to copolymerizable monomer that is selected from the group consisting of styrenic macromer and silicone macromer, claim 3 and claim 8 each include aromatic ring-containing monomer.

Similar objection is raised with respect to each of claim 4 and claim 9 which depend on claim 3 and claim 8 respectively and thus, each also fail to further limit the scope of the claim on which each ultimately depends, namely, claim 1.

(b) Claim 17, which depends ultimately on claim 1, recites “wherein the water-insoluble vinyl polymer comprises polymerized monomeric units of polyethylene glycol monomethacrylate, methacrylic acid, and styrene”, while claim 1 recites that the vinyl polymer is prepared by polymerizing monomer composition comprising 0-45% (A) monomer, 5-45% (B) monomer, 3-40% (C) monomer, and 15-87% (D) monomer. Thus, claim 17 fails to further limit the scope of the claim on which it ultimately depends, namely, claim 1 given that claim 17 is broader than claim 1. That is, while claim 1 requires that the vinyl polymer is obtained from at least (B), (C), and (D) monomers, claim 17 only requires that the vinyl polymer is obtained from (A) monomer, i.e. polyethylene glycol monomethacrylate, and (C) monomer, i.e. methacrylic acid.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 14-15, 18, and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 14, which depends on claim 1, recites “water-insoluble vinyl polymer consisting of polymerized units of polyethylene glycol monomethacrylate, methacrylic acid, and styrene”. The scope of the claim is confusing given that claim 1 has been amended to recite that the vinyl polymer necessarily includes polymerized units of monomer (B), i.e. 5-45%, and necessarily includes at least one copolymerizable monomer (D) selected from the group consisting of a silicone macromer and a styrenic macromer. Thus, it is not clear how the vinyl polymer of claim 14 is limited to consisting of polymerized units of polyethylene glycol monomethacrylate, methacrylic acid, and styrene while claim 1 requires that the vinyl polymer must possess monomer (B) and at least one copolymerizable monomer (D) selected from the group consisting of a silicone macromer and a styrenic macromer.

Similar confusion arises with respect to each of claim 15 and claim 18, which each ultimately depend on claim 1, given that each requires that the vinyl polymer particles consist of water-insoluble vinyl polymer consisting of polymerized units of polyethylene glycol monomethacrylate, methacrylic acid, styrene, and styrenic monomer. The scope of each of the claims is confusing given that claim 1 has been amended to recite that the vinyl polymer necessarily includes polymerized units of monomer (B), i.e. 5-45%. Thus, it is not clear how the vinyl polymer of claim 15 or claim 18 is limited to consisting of polymerized units of polyethylene glycol monomethacrylate, methacrylic acid, styrene, and styrenic monomer while claim 1 requires that the vinyl polymer must possess monomer (B).

(b) Newly added claim 24, which depends on claim 1, recites “wherein (B) is a styrenic macromer”. The scope of claim is confusing given that (B) of claim 1 is monomer of formula

(II), (III), or (IV) with no disclosure that (B) is silicone macromer. Should (B) be changed to (D) in the above cited phrase?

(c) Newly added claim 25, which depends on claim 1, recites "wherein (D) is a silicone monomethacrylate, polypropylene glycol monomethacrylate, methacrylic acid,". The scope of the claim is confusing, firstly, given that some words appear to be missing at the end of the claim and secondly given that (D) as recited in claim 1 is selected from the group consisting of a styrenic macromer and a silicone macromer. Thus, it is not clear how (D) is a silicone monomethacrylate, polypropylene glycol monomethacrylate, methacrylic acid as recited in claim 25. Clarification is requested.

**Double Patenting**

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-10, 13, 20-21, and 24-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16-19 and 21-24 of copending Application No. 10/329,349. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the explanation given in paragraph 3 of the office action mailed 1/12/06.

7. Claims 1-10, 13, 20-21, and 24-26 are directed to an invention not patentably distinct from claims 16-19 and 21-24 of commonly assigned 10/329,349. Specifically, although the conflicting claims are not identical they are not patentably distinct in light of the explanation given in paragraph 3 of the office action mailed 1/12/06.

8. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned 10/329,349, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time

the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

9. Claims 1-10, 13, 20-21, and 24-26 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 10/329,349 which has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application. For an explanation of the rejection, see paragraph 3 of the office action mailed 1/12/06.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. This rejection might also be overcome by showing that the

copending application is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

**Claim Rejections - 35 USC § 103**

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-13, 16-17, and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (U.S. 6,740,690) in view of Tabayashi et al. (U.S. 6,074,467).

The rejection is adequately set forth in paragraph 12 of the office action mailed 1/12/06 and is incorporated by reference.

12. Claims 1-10, 13, 20-21, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1113051.

EP 1113051 discloses water-based ink comprising aqueous dispersion of water-insoluble vinyl polymer particles containing pigment including Pigment Blue 15:4 wherein the polymer is a graft copolymer having acrylic side chain, salt-forming group, and 10-35% nonionic side chain wherein the polymer is obtained from (a) 1-40% (meth)acrylate macromer, (b) salt-forming group containing monomer, and (c) monomer copolymerizable with these monomers such as styrene monomer and styrene macromer with polymerizable functional group wherein at least part of monomer (c) is a monomer of the formula:



where R<sup>1</sup> is hydrogen or C<sub>1</sub>-C<sub>5</sub> alkyl group, R<sup>3</sup> is divalent hydrocarbon group, and R<sup>4</sup> is hydrogen which monomer (c) thus encompasses polyethylene glycol (meth)acrylate and polypropylene glycol (meth)acrylate and wherein monomer (c) is used in mixture of at least two kinds. It is disclosed that the monomers (b) and (c) are present in amount of 60-99% (paragraphs 1, 13, 15, 29, 33-34, 38, 49-52, 54, 72-76, 79, 81-84, 87-88, and 102).

While EP 1113051 fails to exemplify the presently claimed aqueous dispersion nor can the claimed aqueous dispersion be “clearly envisaged” from EP 1113051 as required to meet the standard of anticipation (cf. MPEP 2131.03), nevertheless, in light of the overlap between the claimed aqueous dispersion and the aqueous dispersion disclosed by EP 1113051, it is urged that it would have been within the bounds of routine experimentation, as well as the skill level of one of ordinary skill in the art, to use aqueous dispersion which is both disclosed by EP 1113051 and encompassed within the scope of the present claims and thereby arrive at the claimed invention.

#### Response to Arguments

13. Applicants' arguments and 1.132 declaration filed 6/12/06 have been fully considered but they are not persuasive.

Firstly, it is noted that applicants argue, and the examiner agrees, that in light of amendment to the present claims, EP 1113051 is no longer an anticipatory reference against the present claims.

However, it is the examiner's position that EP 1113051 is now a proper reference against the present claims under 35 USC 103.

Applicants argue that all the cited prior art against the present claims is not relevant in light of applicants' 1.132 declaration filed 6/12/06.

It is noted that the declaration compares aqueous dispersion within the scope of present claims, i.e. comprising vinyl polymer particles obtained from polyethylene glycol monomethacrylate, polypropylene glycol monomethacrylate, methacrylic acid, styrene, and styrenic monomer (example 3), with aqueous dispersion outside the scope of the present claims, i.e. comprising vinyl polymer particles obtained from polyethylene glycol monomethacrylate, methacrylic acid, and styrene (example 1) or obtained from polyethylene glycol monomethacrylate, methacrylic acid, styrene, and styrenic monomer (example 2). It is shown that the aqueous dispersion of the present invention is superior in terms of angular dependency of color tone, i.e. ink has substantially improved color properties and will remain stable even if printed image is not observed at angle.

However, it is the examiner's position that the declaration is not successful in establishing unexpected or surprising results over the cited prior art for the following reasons.

Firstly, it is noted that the data is not commensurate in scope with the scope of the present claims. Specifically, inventive example 3 utilizes amount of styrenic macromer, i.e. 10%, that is outside the scope of the present claims that now require 15-87% of at least one copolymerizable selected from the group consisting of styrenic macromer and a silicone macromer.

With respect to EP 1113051, it is noted that if the same type of comparative data was set forth wherein the inventive example was commensurate in scope with the scope of the present

claims (and there were proper side-by-side comparison between the inventive examples and the comparative examples), such data would be successful in establishing unexpected or surprising results over EP 1113051.

With respect to Nakano et al. in combination with Tabayashi et al., it is the examiner's position that even if the examples were commensurate in scope with the scope of the present claims, the data would not be persuasive given that the data would not be commensurate in scope with the prior art given that the vinyl polymer disclosed by Nakano et al. is closer to that presently claimed than the vinyl polymers utilized in the comparative examples. Specifically, comparative example 1 discloses vinyl polymer particles obtained from polyethylene glycol monomethacrylate, methacrylic acid, and styrene while comparative example 2 discloses vinyl polymer particles obtained from polyethylene glycol monomethacrylate, methacrylic acid, styrene, and styrenic monomer. However, the vinyl polymer of Nakano et al. always requires that the polymer is obtained from five monomers, i.e. (a) monomer having salt forming group which corresponds to presently claimed monomer (C), (b) styrene macromer which corresponds to presently claimed monomer (D), monomer copolymerizable with (a) and (b) such as styrene which corresponds to presently claimed monomer (D), (d) hydroxyl group-containing monomer such as polyethylene glycol methacrylate and hydroxyethyl (meth)acrylate which corresponds to presently claimed monomer (A), and (e) monomer of the formula:



where R<sup>1</sup> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl, R<sup>2</sup>O is alkylene oxide group, and R<sup>3</sup> is hydrogen which corresponds to presently claimed monomer (B). Thus, the vinyl polymer of Nakano et al. is closer to that presently claimed than that utilized in comparative example 1 or 2.

With respect to the double patenting rejection of record, it is noted that applicants argue that the invention of claim 1 is not obvious in view of copending 10/329,349.

However, applicants offer no arguments to support their position. It is noted that copending 10/329,349 discloses water-based ink comprising aqueous dispersion of water-insoluble vinyl polymer containing a colorant wherein the water-insoluble vinyl polymer is prepared by polymerizing 5-45% monomer (A) which is identical to presently claimed monomer (B), 3-40% monomer (B) having a salt-forming group which is identical to presently claimed monomer (C), 15-87% monomer (C) copolymerizable with monomer (A) and monomer (B) and styrenic macromer (E) which is each identical to presently claimed monomer (D), and 5-35% monomer (D) of the formula:



which is identical to presently claimed monomer (A) as well as the use of Pigment Blue 15:4. Additionally, copending 10/329,349 discloses the advantages of using Pigment Blue 15:4 as compared to using Pigment Blue 15:3. Further, it is the examiner's position that the data set forth in the 1.132 declaration filed 6/12/06 and in the present specification is not persuasive in establishing unexpected or surprising results over copending 10/329,349 given that the

copending application already discloses the criticality of using vinyl polymer particles as presently claimed.

Thus, it is the examiner's position that the double patenting rejection of record remains relevant against the present claims.

**Conclusion**

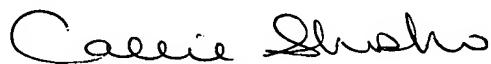
14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Callie E. Shosho  
Primary Examiner  
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CS  
9/2/06